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FUTURE WARFARE PAPER

“The Clash of Opposing Futures: Examining the Role of the Will in Shaping Future Warfare”

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF OPERATIONAL STUDIES

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AY 2004-05

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Approved: _____

Date: 9 March 2005

Report Documentation Page			Form Approved OMB No. 0704-0188		
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 09 MAR 2005		2. REPORT TYPE		3. DATES COVERED 00-00-2005 to 00-00-2005	
4. TITLE AND SUBTITLE The Clash of Opposing Futures: Examining the Role of the Will in Shaping Future Warfare				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) United States Marine Corps,School of Advanced Warfighting, Marine Corps University,2076 South Street, Marine Corps Combat Development Command,Quantico,VA,22134-5068				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 21	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

Introduction

“I believe the image conjured up by “the clash of wills” is a false one. This is not a psychological analogue of two fat Bavarians elbow wrestling across their brimming steine... What we are talking about at root is the creation and manipulation of information, something calling for creative thinking and great subtlety of presentation. The actual forces of which a commander disposes are the materials and tools he uses in realizing his creation.” -Richard Simpkin¹

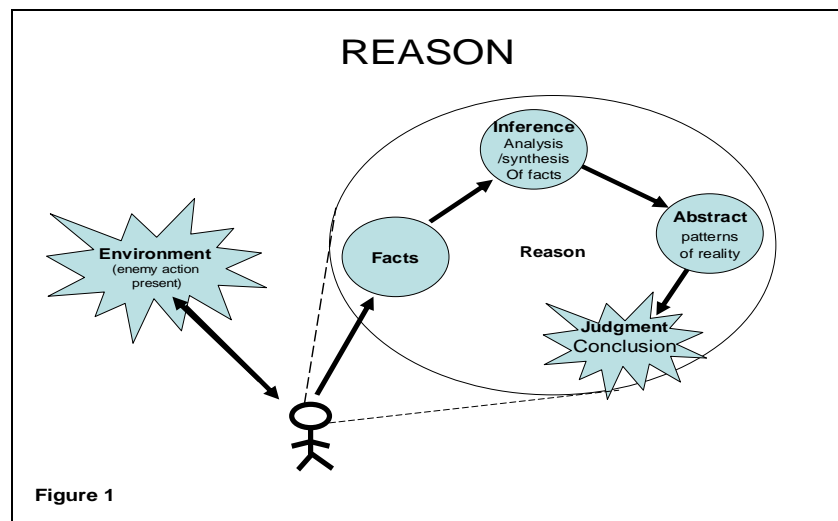
U. S. and Coalition forces conducted a lightning campaign during Operation DESERT STORM, shattering Iraqi forces in a 100-hour ground campaign. During the conflict the United States fielded a highly trained force versed in maneuver warfare doctrine and integrated with the latest equipment and technology. Considering the poor readiness of U.S. forces less than ten years prior, its total transformation was a remarkable feat executed over a relatively short period of time. Were the actions taken by the commander on the scene the decisive factor in achieving success? Considering that the force was created as a result of action taken years in advance of conflict, credit for this victory cannot reside solely with the actions of the operational commander. Whether planned or incidental the decision to create the force may have been the decisive factor in determining victory at the point of physical conflict.

The “clash of wills” as portrayed in Marine Corps Warfighting Doctrine provides a narrow interpretation of the will’s full manifestation in warfare, focused primarily on its role in employment of military force at the point of execution. A broader interpretation of will is required to fully recognize the mental struggle to establish ends as an integral part of the conduct of warfare. The Marine Corps’ failure to account for the volitional act of the will in the conduct of war has restricted its ability to shape future warfare. This paper will examine the nature of the human will within the context of warfare and provide insights on redefining the Marine Corps approach to warfare.

Thinking and Acting

“The essential thing is action. Action has three stages: the decision born of thought, the order or preparation for execution, and the execution itself. All three stages are governed by the will. The will is rooted in character, and for the man of action character is of more critical importance than intellect. Intellect without will is worthless, will without intellect is dangerous.” --Hans Von Seeckt²

The two central activities of the mind are thinking and acting. Thinking achieves understanding and judgment as a function of reason³. Acting initiates intention and movement as a function of will. Although both reason and will are included within the broader context of the human mind, they each perform distinct and complementary roles that enable the mind to transfer thought into action. In order to understand the mind as a catalyst for action in warfare we must understand its parts as well as the interactive process which produces a decision.

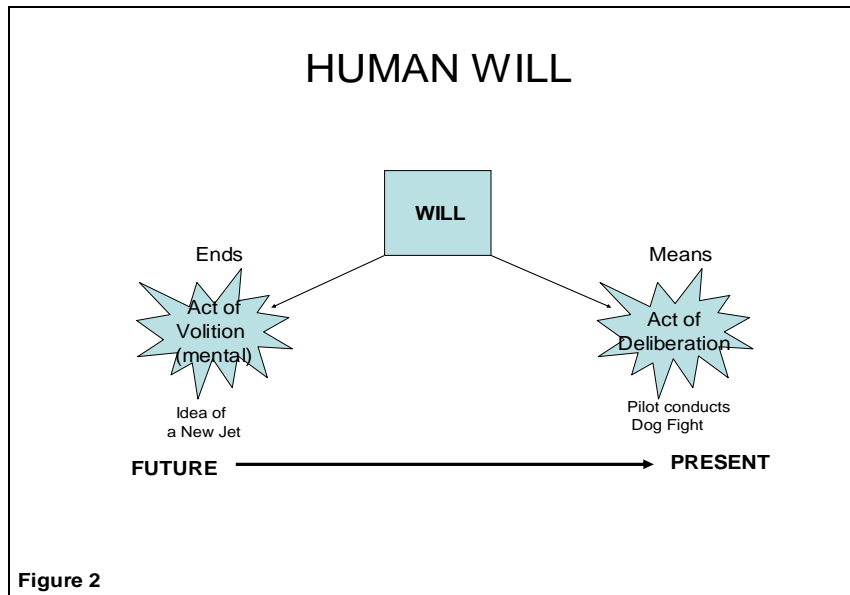


Reason is associated with the mind's cognitive or intellectual abilities. Thinking as an activity of reason, is concerned primarily with forming an understanding or judgment of an act or idea, based on facts known or assumed. To achieve understanding, reason relies foremost on its perceptions gained from observation of the external environment, which are in turn measured in relation to itself. Reason, however, does not rely solely on observations of reality to achieve an understanding of its environment.⁴ It has the ability through inference to further analyze and

synthesize facts in order to arrive at subsequent conclusions beyond those attributed to observed reality. Through abstraction, reason establishes mental patterns or models of observed reality, which further facilitate the understanding of its external environment in relation to itself.

These mental models, much like Newton's law of gravity or the principles of warfare, cannot be found in the real world, but are abstract ideas established upon patterns of observed reality. They serve as "mental tools" allowing the mind to better understand and act within its environment, validating ideas beyond the physical world. Reason provides situational awareness in relation to itself and the external world, establishing the context through which potential acts or ideas of the will are judged. Despite the understanding and perceptive powers of reason, an act of will is required to transfer thought into action.

Unlike reason's passive powers of perception and understanding, the will represents the active power of the mind to direct and drive the mental and physical faculties to motion or rest.⁵ Human will is the motivating force responsible for establishing purpose and intention, and serves as a catalyst for all action executed in both the physical and abstract world. As a creative force, will-power provides a vision of the end to be realized as well as the decision to continue or stop movement towards it. The will is a driving force unfettered by reality that is blind without the understanding and perceptivity of reason. Taken to its extreme, the will has the ability to wish for the impossible, or if separated from reason, to choose the impractical. All acts of will are directed toward future action involving either the establishment of ends or employment of means to achieve a desired end.



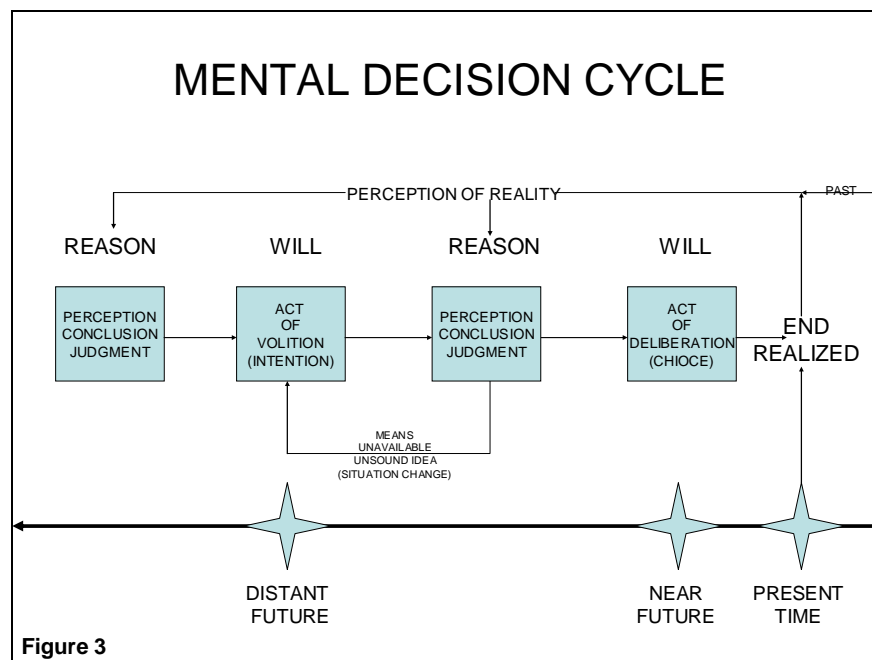
There are two distinct acts of the will, volition and deliberation. Volition is an act that is primarily concerned with ends and is normally associated with wish or intent. It is principally concerned with the distant future and the initiation of mental action in the manipulation of abstract ideas. The Marine Corps' decision to pursue conceptual development of Ship to Objective Maneuver (STOM) represents an act of volition. Volition initiates action in the mental and temporal realms.

Realization of the STOM concept, however, regardless of our greatest efforts, requires that the means are at hand and available to execute it. Deliberation is an act of will that concerns the employment of means under our control, and is normally associated with choice, for example, Napoleon's decision to commit the Imperial Guard at Waterloo. Deliberation is focused on the near future driving action through the manipulation of means existing in reality, and is concerned primarily with physical and spatial movement. Only through an act of deliberation can a desired end be realized through the employment of means in time present.

Achieving a Decision

Having established a basic understanding of the activities of the mind, it is necessary to address the interactive mental process by which a decision is born. The goal of the mind is to achieve a “reasoned act,” or that act which has been judged relevant and appropriate in relation to its environment. Achieving this involves the execution of an interactive mental process in which each respective act of the will is balanced and reconciled against the judgment of reason as described by St. Thomas Aquinas:

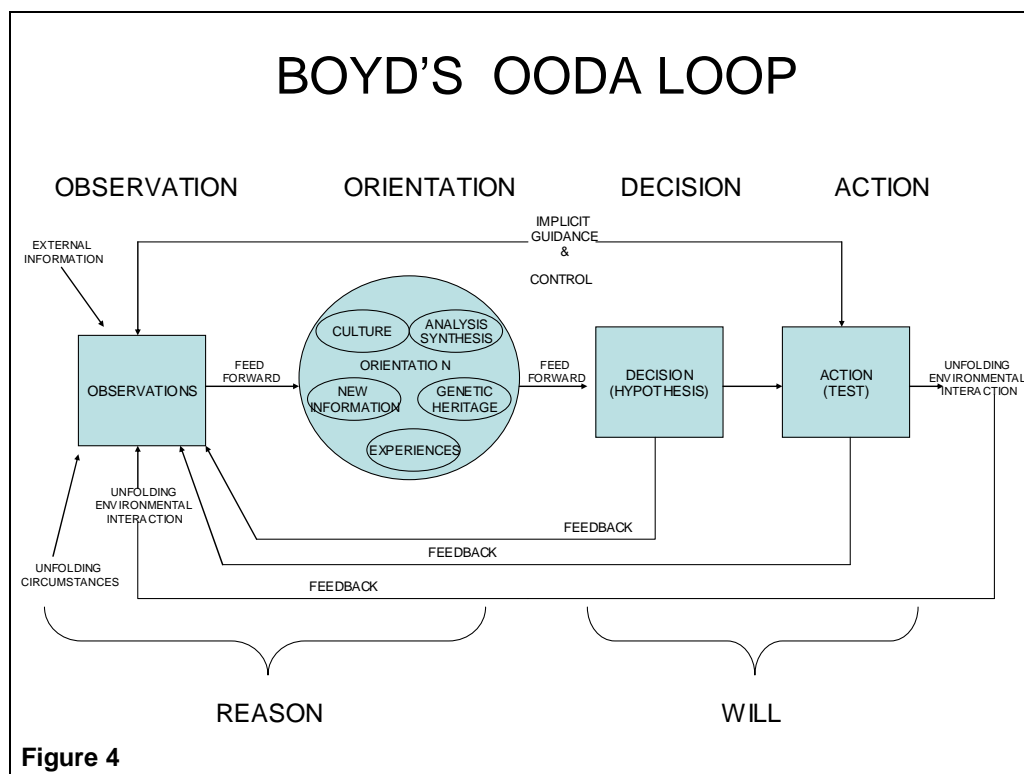
“Each act of will, responds to a distinct act of the practical reason and, except for the will’s last acts (deliberation), each may in turn be followed by further practical thought. This progressive determination of the will by reason goes on until the use of means leads to action and action to the enjoyment of the end accomplished. As in practical reasoning ends come before means, so for the will the end (volition) comes first in the order of intention; but in the order of execution action begins with the means (deliberation)”.⁶



Aquinas’ description depicts the cycle of interaction and balance between the mind’s passive powers of understanding, and its active powers of creation. The mental process can be divided into two major steps; the first step Aquinas calls intention which yields a volitional act, and the second step is execution yielding a deliberative act. Transition from intention to execution requires that the means are at hand to realize the desired end in present time. Prior to

movement from volitional to deliberative an idea may undergo multiple revisions and refinements prior to moving to the next step. This mental action is propelled by the will and guided by reason. Aquinas's mental cycle accounts for decisions made concerning both the near and distant future.

John Boyd's concept of the "OODA Loop" forms the foundation of Marine Corps Maneuver Warfare Doctrine, and bears a similar resemblance to Aquinas' mental cycle. The OODA Loop depicts an individual decision-making mechanism which is concerned primarily with operating at a faster tempo or rhythm in relation to the enemy. The OODA Loop consists of four major steps Observation, Orientation, Decision, and Action.⁷



Boyd's OODA Loop, however, is constructed in a manner that only accounts for the deliberative act of the will. Boyd's first two steps of the cycle, Observation and Orientation are attributed to reason, and the last two steps, Decide and Act are attributed to the deliberative act of the will. Although Boyd's larger theory of conflict accounts for the volitional acts of will, his

OODA Loop construct does not incorporate the volitional act. In order to account for both the deliberative and volitional acts of the will, two OODA Loops would have to be placed one in front of the other. By extending the OODA Loop we can develop a decision model that more accurately accounts for both acts of will and the broadest interpretation of decision making in warfare.

Coming to Terms With the Future

“Let each one examine his thoughts, and he will find them all occupied with the past and future... The Past and present are our means; the future alone is our end” - Blaise Pascal
8

“All actions in warfare take place in an atmosphere of uncertainty, or the “fog of war”. Uncertainty pervades the battlefield in the form of unknowns about the enemy, environment and even friendly forces.”⁹ Although uncertainty in war is manifested in both present and future time, the more difficult challenge in war is coming to terms with the future. Success in war depends on action and action as a product of will is essentially about the future. Therefore success in warfare depends on achieving an understanding of the future and the manner in which it can be shaped to realize our desired end in present time. This being said, how then do we define the future and by what means can we come to terms with it?

The future is an abstract creation of the mind shaped by both observations of reality and the vision of what we wish it to be. The future represents time abstract, and is essentially an idea made to represent what may exist in time present. The mind creates a future just as it creates other abstract ideas in order to better understand and survive in its environment. The idea that a single possible future exists would only be achievable in the event that all individuals chose to adopt a commonly understood vision of it. A single future can only exist if it was willed by some omnipotent being, which would imply that man does not possess free will. In reality there

are multiple possible futures as numerous as people, organizations, or nations in the world. Even if everyone were to agree that the future is a creation of the mind, differences would still arise concerning the manner in which it should be created. There are two basic approaches in which the mind can create a possible future: The first through reason and the second through the will.

The first method called the “reasoned approach,” is one in which the mind utilizes reason to form an abstract picture of the future from patterns of observed reality. This approach is passive in nature, with the mind seeking to perceive and understand the future from its surrounding environment. Reason through synthesis attempts to collate scattered facts from patterns of the past and present to reveal a picture of the future. This approach attempts to understand the future as you would an object that exists, but which has yet to be revealed. The “reasoned approach” seeks to peer behind the curtain in order to understand the future hidden behind it. The reasoned approach may utilize such things as patterns in technology or culture as means to create its possible future. Once the abstract picture of its future is formed, acts of the will perform a secondary role: taking actions that affect future outcomes, but still held within the bounds of that established picture. The ultimate implications of following the “reasoned approach” are to view the future as something that can be predicted and understood.

The second approach, called the “created approach,” relies primarily on the will to create a possible future through volition. This method assumes an active approach that focuses first inward to create a vision of a possible future, and secondly to drive it into realization through subsequent acts of the will. The creative power of the will establishes an idea which is utilized as a model to shape its environment through action in a manner conducive to its success and survival. The will provides the ability to create an idea of the future which may lie beyond the bounds of reality. The “created approach” identifies man as the measure and identifies the future

as simply an abstract tool for achieving the wills desired ends. This approach does not wait for a future to come to it, but instead creates the future through multiple acts of the will. Reason must be utilized in this method to temper and guide the will through judgment. If the appropriate interaction between reason and will is not maintained, the result will be a loss of situational awareness and irrelevance in relation to the world of reality. The “created approach” interprets the future essentially as something to be created and realized.

Both methods place different emphasis on the activity of reason and will in creating an idea or abstract pattern of a potential future. Each approach must establish the right balance between active and passive measures as well as internal and external focus in order to create a relevant future. The “created approach” however, is far more compatible with both the evolutionary nature of man and the conduct of warfare. When applied to warfare, the “created approach” utilizes the future as maneuver space in order to seize the initiative thereby gaining a temporal advantage in relation to the enemy. In order to remain relevant in this endeavor, interaction with reason is essential, particularly in relation to the actions concerning the distant future. War is about taking action to achieve some end in the future, and the “clash of wills” concerns the struggle to impose our future upon an enemy through its realization in present time. If we accept the “created approach” in dealing with the future, then the application of mental force through the act of volition becomes an essential weapon in the conduct of warfare.

The “Clash of Opposing Wills”

“The essence of war is a violent struggle between two hostile, independent wills each trying to impose itself on the other... Clausewitz called it a Zweikampf and suggested the image of a pair of wrestlers locked in a hold, each exerting force and counterforce to try and throw the other.” -MCDP-1 Warfighting¹⁰

What image comes to mind when you contemplate the “clash of wills” portrayed in MCDP-1? Perhaps an image of war appears where two opposing armies are locked in a desperate struggle played out upon a chaotic and uncertain battlefield. As the image becomes clearer you might recognize the ebb and flow of mental, moral, and physical forces as opposing commanders struggle to impose their will upon the other. As you continue to contemplate that image, ask yourself are the actions taken by the commanders acts of deliberation or volition?

Marine Corps doctrine provides an incomplete understanding of warfare which fails to account for the volitional act of will as an integral part of the “clash of wills”. MCDP-1 defines war as “a violent clash of interests between or among organized groups characterized by the use of military force.”¹¹ The use of the word “violent” within its definition indicates that the “clash of wills” depicted is essentially a physical one accounting only for the deliberative act of will. The result is an understanding of war focused primarily on actions conducted in the near future and present, as depicted in MCDP-1:

Appreciating the dynamic interplay between opposing wills is essential to understanding the fundamental nature of war. The object in war is to impose our own will on our enemy. The means to this end is the organized application or threat of violence by military force.¹²

Exclusion of the act of volition from the “clash of wills” limits the scope of warfare to the manipulation of means at the point of execution. As a result the Marine Corps understanding of warfare fails to recognize the mental struggle to establish the ends in war as an integral part of the conduct of war.

This interpretation of warfare may be attributed to the Marine Corps’ understanding and approach to the future. By taking a “reasoned approach” to the future, the Marine Corps relies on the passive understanding of reason to form a picture of the future as opposed to the active powers of the will. Since the distant future is viewed as being beyond our ability to

influence, shaping the future lies outside of the concept of the “clash of wills” and the conduct of warfare. Instead all issues concerning the distant future are addressed by the Marine Corps as a function of preparing for war as depicted in MCDP-1:

There are two basic military functions: waging war and preparing for war. Any military activities that do not contribute to the conduct of a present war are justifiable only if they contribute to preparedness for a possible future one. Clearly we cannot afford to separate conduct and preparation. They must be intimately related because failure in preparation leads to disaster on the battlefield.¹³

The fundamental flaw in the Marine Corps understanding of warfare is a failure to understand the human will. The implications of this are a limited understanding of warfare, a passive approach to the future, and inability to leverage the volitional powers of the will. Failure to account for the volitional act of will within the “clash of wills” in effect surrenders the future to the enemy.

The “Clash of Opposing Futures”

“Machines don’t fight wars. Terrain doesn’t fight wars. Humans fight wars. You must get into the mind of humans. That’s where the battles are won.” - Col John Boyd¹⁴

If we accept that the “clash of wills” includes both the volitional and deliberative acts of the will, then *War can be defined as a clash of wills between or among organized groups characterized by the use of mental and physical force.* The adoption of this broader definition of warfare removes the distinction between the act of waging war and preparing for war including both as part of the conduct of war itself. War as a “clash of opposing wills” understood in its broadest sense would include actions from the earliest acts of volition concerning the distant future, to the last acts of deliberation at the point of execution. Recognition of the volitional power of will in the conduct of warfare expands the scope of warfare beyond that defined in MCDP-1. The result is the inclusion of the struggle for ends as part of the conduct of warfare.

There are two types of struggles contained within this understanding of war: The “war of means” and the “war of ends.”

War of Means

The “war of means” is a struggle of choice fought in close proximity to the point of execution in the near future or present time. This type of struggle can be associated with the traditional understanding of warfare as defined in MCDP-1. The war of means is conducted through the application of both physical and mental force. The defining factor of the “war of means” is its close proximity to the physical instrument of war and the ability to apply physical force in the present. All action in war can be traced ultimately to an act of will; in this case it is primarily the deliberative act.

War of Ends

The war of ends is a struggle of intention concerning the distant future which is fought primarily in the mind. It is differentiated from the “war of means” by its focus on the distant future and separation in time from the physical instrument of war. Action in a “war of ends” is primarily associated with the application of mental force attributed to the volitional act of will, but can include acts of deliberation. Like the “war of means” it is active in nature, first seeking to understand its environment, then taking action to shape it in accordance with its desired ends. The war of ends has three major functions: to achieve a vision of the future, to shape its environment, and to initiate institutional movement toward that goal.

Establishing a vision in the “war of ends” is achieved through an act of volition and is the most important function in the “war of ends.” Achieving a vision requires the interaction of reason and will. Reason first establishes situational awareness in relation to itself and the external environment, and the will establishes its vision or end based on the understanding of

reason. Establishment of a vision for the future allows us to view the conflict from an extended perspective, measuring the relevance of actions in the present against the end to be achieved. Maintaining situational awareness in the “war of ends” is far more difficult than in the present. When considering the future the mind receives no sensory input and must rely on abstract patterns from observed reality to come to an understanding. The further into the future the vision, the more difficult it is to achieve and maintain situational awareness.

The “war of ends” is active and seeks to gain the initiative in the future by forcing the enemy to conform to our vision of the future. In many ways the conduct of the external struggle against the enemy is the most difficult challenge in the conduct of the “war of ends”. Our goal in shaping the enemy in a “war of ends” is to attack his mental process by limiting his ability to orient on his environment. We achieve this through the application of mental force conducted through both active and passive measures such as deception, operational, security, and information operations. All of these actions are conducted in present time but seek to influence his abstract vision of the future. Total success in the conduct of the “war of ends” may make enemy action in the present irrelevant regardless of how well the enemy fights. A failure to fight the “war of ends” effectively surrenders the future to the enemy.

The “war of ends” seeks to coordinate the action of shaping our force in a manner favorable to our success at the point of execution. This function of the “war of ends” is primarily concerned with the internal struggle within the institution to establish a vision, achieve consensus, and finally drive the institution toward that end. This portion of the “war of ends” involves acts of deliberation that contribute to the development of the physical instrument of war. Above all, these efforts must be approached as an integral part of warfare, actively focused on the evolution of the institution in relation to the enemy and the desired end.

Extended OODA LOOP

Through the modification of John Boyd's OODA Loop we are able to provide a decision making model that accounts for both the "war of means" and "war of ends" within a broader interpretation of warfare. The mental process used to achieve a decision in a "war of ends" is accomplished through essentially the same process as in the war of means. The volitional decision cycle, however, is distinct and precedes that of the deliberative cycle. This can best be represented by expanding Boyd's OODA Loop into two linked cycles.(fig 5) The first cycle concerns the volitional act applied in "the war of ends," the second concerns the deliberative act applied in "the war of means." Transition from the first cycle to the second occurs when the means are available to achieve the desired end.

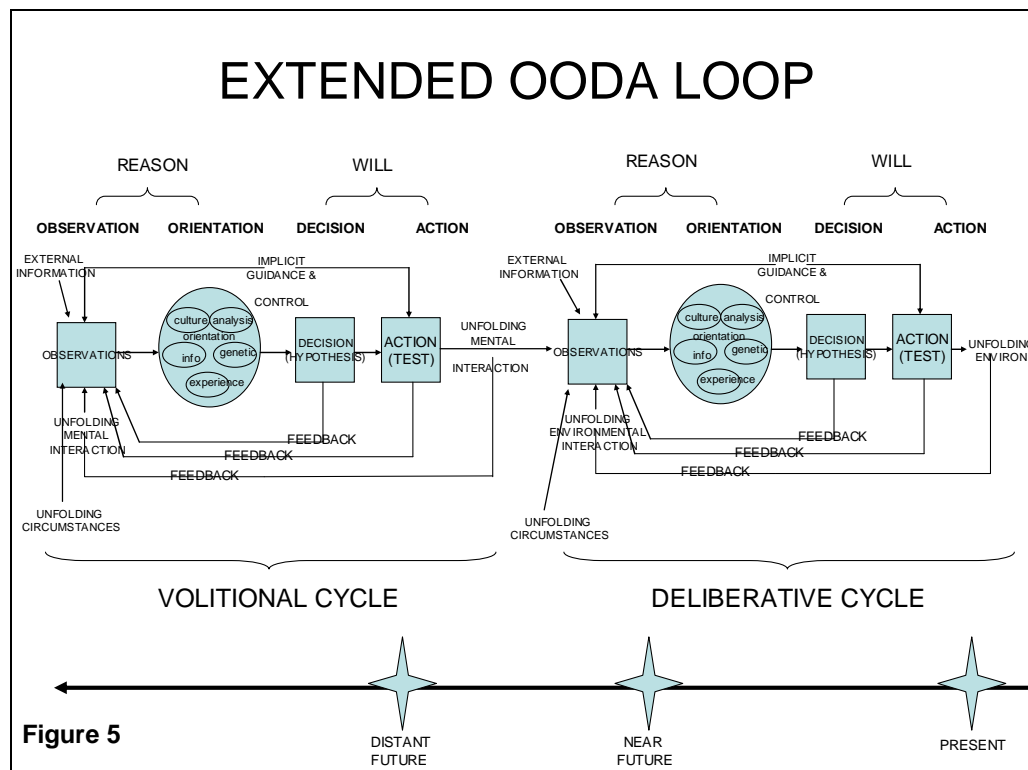


Figure 5

The “war of means” is represented by the deliberative cycle of the extended OODA Loop. By rapidly cycling through a series of OODA Loops we seek to operate at a faster tempo in relation to the enemy. The goal in operating at a faster tempo is the disruption of the enemy decision cycle by limiting his ability to effectively orient on his environment. The resulting effect on the enemy is a loss of situational awareness and a failure to make decisions that are appropriate to the situation.¹⁵ The “war of means” therefore seeks victory through the manipulation of time by compressing it and thereby shortening the distance between thought and action.

The “war of ends” is represented in the volitional cycle of the extended OODA Loop. In this case the will creates a vision of a possible future which in effect expands time. The result is an extended distance between thought and action in present time and a slowing of tempo. The expansion of time is an advantage when considered within the context of the “war of ends.” An expanded vision of the future allows time for further refinement of ideas and efforts to organize, develop, and train the physical instrument of war through subsequent acts of deliberation. The ability to achieve an accurate vision of the future will allow a significant reduction in time to develop the means required to realize our desired end at the point of execution. Provided that the vision is relevant to the current situation, a significant advantage in time and perception may be achieved in relation to the enemy. In the “war of ends” time is utilized as a weapon but in a completely different manner than in the “war of means”. In the “war of ends” the desired effect in the manipulation of time is to expand instead of contract and slow down versus speed up.

Fighting Future War

“ To make decisions implies that we must be able to form mental concepts of observed reality, as we perceive it, and be able to change these concepts as reality itself appears to change”- Col John Boyd¹⁶

Fighting a “war of ends” is a war of intention, not choice, fought in an environment consisting of time and mind. The battlefield in the future has no restrictions other than those imposed by rational judgment. Uncertainty, disorder, complexity, and friction are only relative to the extent that reason considers other possible futures. Those possible futures may be created by the commander’s own will or those futures perceived of an opposing combatant. The commander’s creative powers are unlimited and balanced by perceptions of reality but never bound by them. The future is the playground of the will in the environment of unlimited possibilities; however, all acts of the will in future warfare must be controlled by the perception and judgment of reason. The weapon of choice is mental force applied through perception and creativity, the objective is to achieve an advantage in time, information and technology at the point of deliberation. The dilemmas faced in a “war of ends” are threefold: figuring out how to conduct future warfare, viewing future warfare as a legitimate means of warfare, ensuring that future war’s focus of effort is in concert with reality.

The risks of losing both informational and technological dominance have catastrophic implications for the survival of the state. As a result, the modern state is required to push deeper and deeper into the future to maintain an advantage in time. Observed in this light, winning the “war of ends” appears to be not only relevant but absolutely essential.

Conclusion

It is possible that the first salvo of a future war in the year 2020 has already been fired. That engagement as the opening stages of war is an attempt by the enemy to establish and

impose his future upon us. The initial stage of this conflict is being played out in our minds and the minds of our enemy as a direct manifestation of the “clash of opposing wills”. Victory in the “war of ends” is achieved when the means for realizing his possible future can be attained in a shorter period of time than our own. A decisive victory for the enemy could determine the outcome of a physical clash of forces years prior to its execution, rendering the most effective conduct of a “war of means” irrelevant.

Fighting a “war of ends” is not possible within the current Marine Corps definition of warfare. The Marine Corps understanding of war provides a limited interpretation of conflict principally centered on physical means applied at the point of execution. This interpretation accounts for only a portion of a much larger conflict. The doctrinal separation of preparing for war from waging war assumes a passive approach to the “war of ends”. This approach prevents coordinated measures to actively manipulate and shape the future as an activity of war, effectively surrendering the initiative to the enemy.

Marine Corps Doctrine requires an approach to warfare which accounts for the volitional act of will as integral part of the “clash of wills”. A revised definition of war would incorporate both the “war of means” and “war of ends” as the two central activities under a broader concept of warfare. Recognizing the “war of ends” as an integral part of warfare allows the ability to expand time utilizing the future as a tool to actively shape the enemy and our self to conditions favorable our success.

The fundamental flaw in the Marine Corps approach to warfare is a failure to understand the human will. The result of this misinterpretation is a failure to recognize that the future resides in the human mind, and can be shaped through the conduct of a “war of ends”

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- ¹ Richard E. Simpkin, *Race to the Swift: Thought on 20th Century Warfare*, London: Brassey's, 1985, p.226.
- ² U. S. Marine Corps, Quantico , VA, MCDP-1 *Warfighting*, 20 June 1997, p.51.
- ³ Thomas Gilby, , *St Thomas Aquinas: Philosophical Texts*, First Labyrinth Press, 1982, p.262.
- ⁴ Mortimer J., Adler, *The Great Ideas: A Lexicon of Western Thought*, Macmillian Publishing Company, New York 1952, p543.
- ⁵ Ibid. , p929.
- ⁶ Ibid. , p927.
- ⁷ Jason, Spitaletta, *The Transformation Battlefield*, Industrial Engineer Magazine, January 2003.
- ⁸ Adler, p857.
- ⁹ U. S. Marine Corps, Quantico , VA, MCDP-1 *Warfighting*, 20 June 1997, p.7.
- ¹⁰ Ibid. , p.3.
- ¹¹ Ibid. , p3.
- ¹² Ibid. , p4.
- ¹³ Ibid. , pp 67-68.
- ¹⁴ David S Fadok,. Major, USAF, *John Boyd and John Warden: Air power's Quest for Strategic Paralysis*, Air University Press, Maxwell Air Force Base, Alabama, 1995. p13.
- ¹⁵ Ibid. , p16.
- ¹⁶ John R Boyd. "A Discourse on Winning and Losing." (August 1987) A collection of unpublished briefings and essays. Marine Corps University Library, Code C0953.

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